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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of	:	Customer Number: 46320
	:	
Kwasi ASARE, et al.	:	Confirmation Number: 3074
	:	
Application No.: 10/725,728	:	Group Art Unit: 2191
	:	
Filed: December 2, 2003	:	Examiner: M. Brophy
	:	
For: SCRIPT GENERATION ENGINE AND MAPPING SEMANTIC MODELS FOR TARGET PLATFORM		

**APPEAL BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed September 11, 2007, and further in response to the Examiner reopening prosecution in the Office Action dated November 28, 2007, and further in response to the Examiner reopening prosecution in the Office Action dated December 19, 2008, wherein Appellants appeal from the Examiner's rejection of claims 1-17.

**I. REAL PARTY IN INTEREST**

This application is assigned to IBM Corporation by assignment recorded on April 26, 2004, at Reel 014572, Frame 0465.

## **II. RELATED APPEALS AND INTERFERENCES**

Appellants are unaware of any related appeals and interferences.

## **III. STATUS OF CLAIMS**

Claims 1-17 are pending and four-times rejected in this Application, and it is from the multiple rejections of claims 1-17 that this Appeal is taken.

## **IV. STATUS OF AMENDMENTS**

The claims have not been amended subsequent to the imposition of the Fourth Office Action dated December 19, 2008 (hereinafter the Fourth Office Action).

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

Referring to Fig. 1 and to independent claim 1, an application component distribution system includes a repository 120, a mapping 110, and a script generation engine 200. The repository 120 of semantic models are for interdependent ones of application components 130 (lines 4-10 of paragraph [0023] of Appellants' disclosure). The mapping 110 of individual listings in the semantic models are to target platform 190 specific installation instructions (lines 1-5 of paragraph [0024]). The script generation engine 200 is configured to produce a target specific set of instructions 160 for a specified application component based upon a mapping of at least one of the semantic models in the repository 120 (lines 6-14 of paragraph [0024]).

Referring to Fig. 2 and to independent claim 5, and script generation engine 200 comprises a communicate coupling, a mapping, and a script composition processor. The communicative coupling is to a repository 250 of semantic models 260 for interdependent ones

of application components configured for installation in a target platform 210 (lines 5-11 of paragraph [0028]). The mapping of individual listings in the semantic models 260 are to specific installation instructions 270 for specific target platforms 210 (lines 6-7 of paragraph [0026]). The script composition processor is programmed to produce a specific set of instructions 240 for installing a specified one of the interdependent application components 220, 230 in a specified one of the target platforms based upon the mapping (lines 5-8 of paragraph [0028]).

Referring to Fig. 3 and to independent claim 8, a method for generating an installation script for installing an application component to a specific target platform is disclosed. In block 330, a semantic model for the application component is retrieved from a communicatively coupled repository of semantic models (lines 4-5 of paragraph [0030]). In block 340, a set of dependent components required to be present in the specific target platform are determined from the semantic model (lines 5-10 of paragraph [0030]). In block 350, a set of resource requirements required to be met by the specific target platform are further determined from the semantic model (lines 1-9 of paragraph [0031]). In block 370, the set of dependent components and the set of resource requirements are mapped into platform specific instructions in a platform specific installation script (lines 4-10 of paragraph [0032]).

Referring to Fig. 3 and to independent claim 13, a machine readable storage having stored thereon a computer program for generating an installation script for installing an application component to a specific target platform is disclosed. The computer program comprises a routine set of instructions when executed cause the machine to perform the following steps. In block 330, a semantic model for the application component is retrieved from a communicatively coupled repository of semantic models (lines 4-5 of paragraph [0030]). In block 340, a set of dependent components required to be present in the specific target platform

are determined from the semantic model (lines 5-10 of paragraph [0030]). In block 350, a set of resource requirements required to be met by the specific target platform are further determined from the semantic model (lines 1-9 of paragraph [0031]). In block 370, the set of dependent components and the set of resource requirements are mapped into platform specific instructions in a platform specific installation script (lines 4-10 of paragraph [0032]).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

1. Claims 1-12 were rejected under 35 U.S.C. § 101; and
2. Claims 1-17 were rejected under 35 U.S.C. § 103 for obviousness based upon Marino et al., U.S. Patent No. 6,681,391 (hereinafter Marino), in view of Bragulla et al., U.S. Patent Publication No. 2004/0078793 (hereinafter Bragulla).

**VII. ARGUMENT**

**THE REJECTION OF CLAIMS 1-12 UNDER 35 U.S.C. § 101**

For convenience of the Honorable Board in addressing the rejections, claims 2-4 stand or fall together with independent claim 1; claims 6 and 7 stand or fall together with independent claim 5; and claims 9-12 stand or fall together with independent claim 8.

**Claim 1**

Independent claim 1 recites "a repository of semantic models." A repository is a storage device, and thus, claim 1 is directed to statutory subject matter. Additionally, claim 1 recites "a script generation engine" that is configured to produce instructions. For the claimed script generation engine to produce instructions, the claimed script generation must necessarily be tied to hardware since software per se is incapable of producing instructions. Therefore, claim 1 is directed to statutory subject matter.

**Claim 5**

Independent claim 5 recites "a communicative coupling" and "a script composition processor," and both of these elements are devices. Therefore, claim 5 is also directed to statutory subject matter.

**Claim 8**

Independent claim 1 refers to retrieving a semantic model from a "repository of semantic models." As already discussed above, a repository is a device, and thus, the method of claim 8 is tied to a specific machine. Therefore, claim 8 is also directed to statutory subject matter.

**THE REJECTION OF CLAIMS 1-17 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS BASED  
UPON MARINO IN VIEW BRAGULLA**

For convenience of the Honorable Board in addressing the rejections, claims 3-7 stand or fall together with independent claim 1; claim 2 stands or falls alone; and claims 9-17 stand or fall together with dependent claim 8.

As is evident from Appellants' comments below, there are questions as to how the limitations in the claims correspond to features in the applied prior art. In this regard, reference is made to M.P.E.P. § 1207.02, entitled "Contents of Examiner's Answer." Specifically, the following is stated:

(A) CONTENT REQUIREMENTS FOR EXAMINER'S ANSWER. The examiner's answer is required to include, under appropriate headings, in the order indicated, the following items:

...

(9)(e) For each rejection under 35 U.S.C. 102 or 103 where there are questions as to how limitations in the claims correspond to features in the prior art even after the examiner complies with the requirements of paragraphs (c) and (d) of this section, the examiner must compare at least one of the rejected claims feature by feature with the prior art relied on in the rejection. The comparison must align the language of the claim side-by-side with a reference to the specific page, line number, drawing reference number, and quotation from the prior art, as appropriate. (emphasis added)

Therefore, if the Examiner is to maintain the present rejections and intends to file an Examiner's Answer, the Examiner is required to include the aforementioned section in the Examiner's Answer.

On October 10, 2007, the Patent Office issued the "Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in KSR International Co. v. Teleflex Inc.," 72 Fed. Reg. 57,526 (2007) (hereinafter the Examination

Guidelines). Section III is entitled "Rationales To Support Rejections Under 35 U.S.C. 103." Within this section is the following quote from the Supreme Court: "rejections on obviousness grounds cannot be sustained by merely conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741 (2007) (quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Referring to the first column on page 57,529 of the Examination Guidelines for Determining Obviousness, the following is a list of rationales that may be used to support a finding of obviousness under 35 U.S.C. § 103:

(A) Combining prior art elements according to known methods to yield predictable results;

(B) Simple substitution of one known element for another to obtain predictable results;

(C) Use of known technique to improve similar devices (methods, or products) in the same way;

(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

(E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.



1 Upon reviewing the Examiner's analysis on pages 4 and 5 of the Fourth Office Action, the  
2 Examiner appears to be employing rationale (G). However, the Examiner's analysis is no  
3 entirely clear as to what rationale the Examiner is employing. As such, Appellants request that  
4 the Examiner clearly identify the rationale, as described in the Examination Guidelines for  
5 Determining Obviousness, being employed by the Examiner in rejecting the claims under 35  
6 U.S.C. § 103.

7  
8 Referring again to rationale (G), as discussed on page 57,534 of the Examination  
9 Guidelines, the following findings of fact must be articulated by the Examiner:

10 (1) a finding that there was some teaching, suggestion, or motivation,  
11 either in the references themselves or in the knowledge generally available to one  
12 of ordinary skill in the art, to modify the reference or to combine reference  
13 teachings;

14 (2) a finding that there was reasonable expectation of success; and

15 (3) whatever additional findings based on the Graham factual inquiries  
16 may be necessary, in view of the facts of the case under consideration, to explain  
17 a conclusion of obviousness.

18  
19 Referring to the paragraph entitled "Office Personnel as Factfinders" on page 57,527 of  
20 the Examination guidelines, the following was stated:

21 Office personnel fulfill the critical role of factfinder when resolving the  
22 *Graham* inquiries. It must be remembered that while the ultimate determination of  
23 obviousness is a legal conclusion, the underlying *Graham* inquiries are factual.  
24 When making an obviousness rejection, Office personnel must therefore ensure  
25 that the written record includes findings of fact concerning the state of the art and  
26 the teachings of the references applied. In certain circumstances, it may also be  
27 important to include explicit findings as to how a person of ordinary skill would

1 have understood prior art teachings, or what a person of ordinary skill would have  
2 known or could have done. Factual findings made by Office personnel are the  
3 necessary underpinnings to establish obviousness.  
4

5 In Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), the Supreme Court set  
6 forth the factual inquiries that are to be applied when establishing a background for determining  
7 obviousness under 35 U.S.C. 103. These factual inquiries are summarized as follows:

- 8 (A) Determine the scope and content of the prior art;  
9 (B) Ascertain the differences between the prior art and the claims at issue;  
10 (C) Resolve the level of ordinary skill in the pertinent art; and  
11 (D) Evaluate any indicia of nonobviousness.  
12

13 However, in order to make a proper comparison between the claimed invention and the prior art,  
14 the language of the claims must first be properly construed. See In re Paulsen, 30 F.3d 1475,  
15 1479 (Fed. Cir. 1994). See also, Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1567-68  
16 (Fed. Cir. 1987) (In making a patentability determination, analysis must begin with the question,  
17 "what is the invention claimed?" since "[c]laim interpretation, ... will normally control the  
18 remainder of the decisional process.") See Gechter v. Davidson, 116 F.3d 1454, 1460 (Fed. Cir.  
19 1997) (requiring explicit claim construction as to any terms in dispute).  
20

21 Upon reviewing the Examiner's analysis in view of the requirements discussed above  
22 necessary for the Examiner to establish a prima facie case of obviousness, Appellants recognize  
23 numerous deficiencies in the Examiner's analysis.  
24  
25

Claim 1

Independent claim 1 recites "a repository of semantic models for interdependent ones of application components." On page 3 of the Fourth Office Action, the Examiner asserted that the data structure 230 of Marino corresponds to the claimed repository of semantic models and the "components 222 to be installed" of Marino corresponds to the claimed "interdependent ones of application components." Appellants respectfully submit that the Examiner has mischaracterized the scope and content of Marino.

Notably absent from the Examiner's analysis is a claim construction for the terms at issue. For example, the claimed "a repository of semantic models" requires a *plurality* of semantic models being stored with a repository (i.e., a storage device). This also implies that the semantic models were previously created (in order to be stored). Column 13, lines 19-35 of Marino, which is the passage cited by the Examiner to teach these limitations, does not teach all of these limitations. Instead, Marino discloses that the "installation-affecting-relationship manager 220 computes entries for an installation-relationship matrix 226 and initializes parameters 228," which are found within the data structure 230 (see Fig. 5), and these calculations appear to be done contemporaneously upon receiving information about the components to be installed. Notably absent from these passages is any indication that a *plurality* of data structures 230 (i.e., allegedly corresponds to the claimed semantic models) are stored in a repository. The absence of such a teaching is consistent with Marino, which teaches that the information contained within the data structure 230 is computer in an as-needed manner.

1           Additionally, although the claimed specifically recites "semantic models for  
2 interdependent ones of application components" (emphasis added), column 13, lines 33-35 of  
3 Marino specifically states the following: "there is no requirement that components 222 be  
4 related or be represented as a single tree or connected graph." Thus, for the above presented  
5 reasons," Marino fails to teach the limitations for which the Examiner is relying upon Marino to  
6 teach.

---

8  
9           Independent claim 1 further recites "a mapping of individual listings in said semantic  
10 models to target platform specific installation instructions." With regard to these limitations, the  
11 Examiner asserted the following in the paragraph spanning pages 3 and 4 of the Fourth Office  
12 Action:

13           a mapping of individual listings (**translation of 230 to 232, FIG.5** ) in said semantic models to  
14 target platform specific installation instructions ("**specific**" taught by update of 232 based on  
15 **user's platform**) (Col. 14, Ln 13-31 "**The current state of the user's machine is determined. If**  
16 **one or more components are incompatible with the components to be loaded, the offending**  
17 **components are removed in an orderly fashion so that components dependent on them are**  
18 **also removed. The procedure described for the mutually exclusive relationship can be used**  
19 **to implement this operation in accordance with the invention. This is followed by installation**  
20 **of the requested components, also in accordance with the invention, e.g., the method outlined**  
21 **in the flow chart in FIG. 4.**") (emphasis in original)  
22

23           Although the Examiner refers to "translation of 230 to 232," no such translation exists. Instead,  
24 column 13, lines 26-30 of Marino states:

25           The installation-affecting-relationship manager 220 computes entries for an installation-  
26 relationship matrix 226 and initializes parameters 228 and in a data structure 230 as well as an  
27 Installation\_order list 232 (step 202).  
28

29           Thus, there is no "translation of 230 to 232" since the manager 220 appears to independently  
30 create the data structure 230 and the installation order list 232. As such, the installation order list  
31 232 is not mapped to anything (i.e., individual listings) within the alleged semantic model (i.e.,  
32 data structure 230).

1  
2 With regard to the "target platform specific installation instructions," the Examiner's cited  
3 passage of column 14, lines 13-31 is not relevant to the claimed limitations. As claimed, certain  
4 individual listings (which are found in the semantic models) are mapped to a target platform  
5 specific installation instructions. As such, when a specific target platform is encountered, the  
6 requirements (e.g., installation instructions) for the specific target platform can be identified (see  
7 discussion regarding block 310 in paragraph [0029] and discussion of feature 210 within  
8 paragraph [0026] of Appellants' disclosure). Although the Examiner's cited passage refers to the  
9 "current state of the user's machine," this state is not related to the target platform. Instead, the  
10 state refers to the components (i.e., applications that run on a computing platform). As one  
11 having ordinary skill in the art would recognize, there is a fundamental difference between the  
12 components (which run on a computing platform) and the platform itself.

13  
14 Claim 2

15 Dependent claim 2 recites "each of said semantic models comprises a listing of  
16 component relationships, target platform requirements and platform neutral installation  
17 instructions." Regarding the claimed target platform requirements, on page 5 of the Fourth  
18 Office Action, the Examiner referred to the teaching of "[t]he current state of the user's machine  
19 is determined." Appellants' position is that the current state of a user's machine is not  
20 comparable to the claimed target platform requirements. The "current state" of a machine merely  
21 reflects the current configuration of the user's machine. On the contrary, the target platform  
22 requirements, describe the requirements of the target platform. These are entirely different

concepts. Thus, the Examiner has mischaracterized the scope and content of the applied prior art with regard to claim 2.

Claim 8

Appellants incorporate herein, as also applying to claim 8, the arguments presented above with regard to claim 1. Additionally, Appellants note that independent claim 8 recites "determining from said semantic model, a set of dependent components required to be present in the specific target platform." The Examiner's analysis regarding these limitations is found on page 7 of the Fourth Office Action and reproduced below:

determining from said semantic model (230), a set of dependent components required to be present in the specific target platform (232, see below Col. 14, Ln 13-31 ) (Col. 13, Ln 19-35 **"Additional information may be received by the installation-affecting-relationship manager 220 from a Core Engine 224, e.g., a list of components 222 to be installed and the like. The installation-affecting-relationship manager 220 computes entries for an installation-relationship matrix 226 and initializes parameters 228 and in a data structure 230 as well as an Installation\_order list 232 (step 202)."**) (emphasis in original)

The Examiner's analysis is in error as to at least three issues. First, the passage cited by the Examiner does not describe that anything is obtained from the data structure 230 (i.e., "determining from said semantic model"). Instead, the passage describes the manager 220 computing information to be included within the data structure 230.

Second, the alleged teaching of "a set of dependent components" (i.e., the installation order list 232) is not derived from the data structure 230. Instead, the manager 220 creates the installation order list 232 while also creating the data structure 230.

Third, the installation order list 232 is not described as a "a set of *dependent* components." Column 13, lines 33-35 of Marino specifically states the following: "there is no

1 requirement that components 222 be related or be represented as a single tree or connected  
2 graph." Since there is no requirement that the components 222 be related, Marino cannot teach  
3 that the components are dependent components since a dependency is a type of a relationship.

4

Conclusion

Based upon the foregoing, Appellants respectfully submit that the Examiner's rejections under 35 U.S.C. §§ 101, 103 is not viable. Appellants, therefore, respectfully solicit the Honorable Board to reverse the Examiner's rejection under 35 U.S.C. §§ 101, 103.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due under 37 C.F.R. §§ 1.17, 41.20, and in connection with the filing of this paper, including extension of time fees, to Deposit Account 09-0461, and please credit any excess fees to such deposit account.

Date: May 19, 2009

Respectfully submitted,

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## **VIII. CLAIMS APPENDIX**

1. An application component distribution system comprising:
  - a repository of semantic models for interdependent ones of application components;
  - a mapping of individual listings in said semantic models to target platform specific installation instructions; and,
  - a script generation engine configured to produce a target specific set of instructions for a specified application component based upon a mapping of at least one of said semantic models in said repository.
2. The application component distribution system of claim 1, wherein each of said semantic models comprises a listing of component relationships, target platform requirements and platform neutral installation instructions.
3. The application component distribution system of claim 2, wherein said component relationships comprises at least one component relationship selected from the group consisting of a containment relationship, a usage relationship, a contradiction relationship, and an equivalence relationship.
4. The application component distribution system of claim 1, further comprising a Web services interface to said repository configured to permit remote access to said repository.
5. A script generation engine comprising:

a communicative coupling to a repository of semantic models for interdependent ones of application components configured for installation in a target platform;

a mapping of individual listings in said semantic models to specific installation instructions for specific target platforms; and,

a script composition processor programmed to produce a specific set of instructions for installing a specified one of the interdependent application components in a specified one of said target platforms based upon said mapping.

6. The script generation engine of claim 5, wherein each of said semantic models comprises a listing of component relationships, target platform requirements and platform neutral installation instructions.

7. The script generation engine of claim 6, wherein said component relationships comprises at least one component relationship selected from the group consisting of a containment relationship, a usage relationship, a contradiction relationship, and an equivalence relationship.

8. A method for generating an installation script for installing an application component to a specific target platform, the method comprising the steps of:

retrieving a semantic model for the application component from a communicatively coupled repository of semantic models;

determining from said semantic model, a set of dependent components required to be present in the specific target platform;

further determining from said semantic model a set of resource requirements required to be met by the specific target platform; and,

mapping said set of dependent components and said set of resource requirements into platform specific instructions in a platform specific installation script.

9. The method of claim 8, further comprising the steps of:

yet further determining from said semantic model a set of platform neutral installation operations; and,

further mapping said set of platform neutral installation operations into said platform specific instructions.

10 The method of claim 8, wherein the determining step comprises the steps of:

identifying a set of dependent components for the application component; and,

further identifying a set of sub-dependent components for at least one of said dependent components.

11. The method of claim 10, further comprising the step of repeating the identifying and further identifying steps for each dependent and sub-dependent component in a hierarchy of dependent components for the application component.

12. The method of claim 8, wherein the further determining step comprises the step of computing an composite set of resource requirements for the application component and for said set of dependent components.

13. A machine readable storage having stored thereon a computer program for generating an installation script for installing an application component to a specific target platform, the computer program comprising a routine set of instructions when executed cause the machine to perform the steps of:

retrieving a semantic model for the application component from a communicatively coupled repository of semantic models;

determining from said semantic model, a set of dependent components required to be present in the specific target platform;

further determining from said semantic model a set of resource requirements required to be met by the specific target platform; and,

mapping said set of dependent components and said set of resource requirements into platform specific instructions in a platform specific installation script.

14. The machine readable storage of claim 13, further comprising the steps of:

yet further determining from said semantic model a set of platform neutral installation operations; and,

further mapping said set of platform neutral installation operations into said platform specific instructions.

15. The machine readable storage of claim 13, wherein the determining step comprises the steps of:

identifying a set of dependent components for the application component; and,

further identifying a set of sub-dependent components for at least one of said dependent components.

16. The machine readable storage of claim 15, further comprising the step of repeating the identifying and further identifying steps for each dependent and sub-dependent component in a hierarchy of dependent components for the application component.

17. The machine readable storage of claim 13, wherein the further determining step comprises the step of computing an composite set of resource requirements for the application component and for said set of dependent components.

**IX. EVIDENCE APPENDIX**

No evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the Examiner has been relied upon by Appellants in this Appeal, and thus no evidence is attached hereto.

**X. RELATED PROCEEDINGS APPENDIX**

Since Appellants are unaware of any related appeals and interferences, no decision rendered by a court or the Board is attached hereto.